Burroughs Corporation

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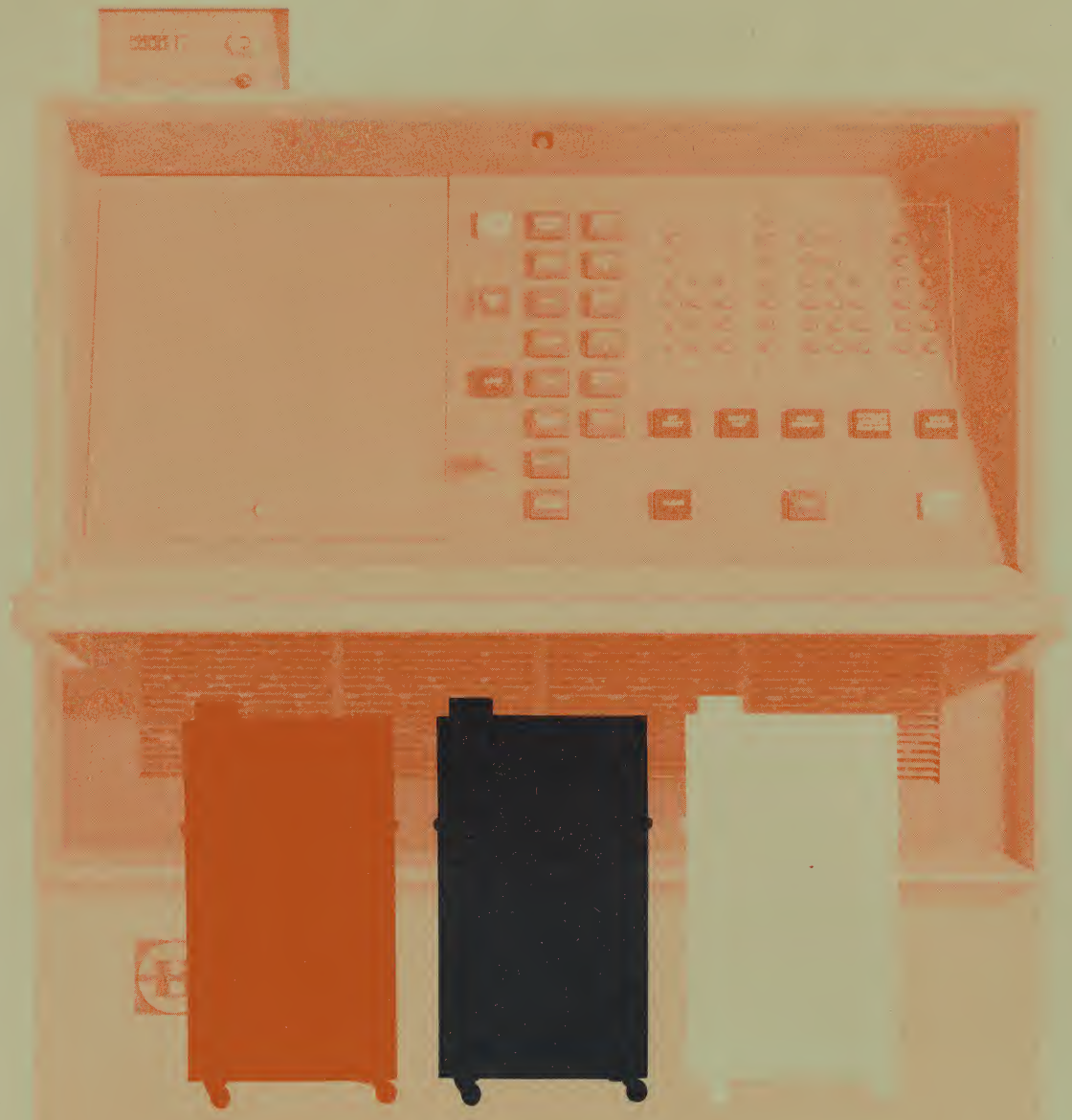
Burroughs

B300

ELECTRONIC
DATA PROCESSING
SYSTEM



ON-LINE/ OFF-LINE/ MULTIPROCESSING

Burroughs
B300 EDP SYSTEM

The new Burroughs B 300 Electronic Data Processing System is like three computers in one, capable of handling:

ON-LINE transactions, inquiries, and communications, under control of an operating system program that always gives rush priority to on-line work—then, between on-line tasks, turns the B 300 back to . . .

OFF-LINE work, like report writing, payrolls, statement preparation, invoicing, data conversion, inventory control—the entire range of general purpose computer applications. Not just handling one job, but . . .

MULTIPROCESSING (or time sharing) several of these off-line programs at once, with or without interruptions for on-line processing.

TRIPLE MODULARITY

The Burroughs B 300 is a *growth* computer, with three kinds of modularity:

PROCESSOR modularity, with your choice of three memory sizes, seven input/output control options, and 13 processor command and feature options.

SYSTEM modularity, giving the B 300 an expansion capability from simple punched card or paper tape systems to full scale on-line, data communications, random access configurations which can include up to four B 300 computers sharing the same random access file.

PROGRAM modularity, making possible new techniques in program segmentation and using less expensive random access storage as a very fast, massive extension of the computer's memory.

MAXIMUM EASE OF USE THROUGH HARDWARE/SOFTWARE DESIGN

The Burroughs B 300 has been designed for maximum ease of use as a *problem solving tool*. The equipment design eliminates many of the considerations formerly requiring program control. Even more programing problems are eliminated by B 300 software. As a result, the programmer's time is spent *solving the problem*—not solving the equipment. Here are a few of these hardware and software design features:

HARDWARE

BUFFERED INPUT/OUTPUT

Magnetic core buffers outside the main processor memory compensate for speed differences between slower electromechanical input/output devices and processor speeds. Operations are overlapped, with all units operating simultaneously at rated speeds. Buffering eliminates the need for more expensive, multiple I/O channels—and eliminates complex I/O timing considerations from the programing job.

MASSIVE MEMORY EXTENSION

No program is too big for a Burroughs B 300/disk file system. Processor core memory may be used principally for operating system and work area storage. The bulk of the programs may be written in compact segments for disk storage, where they are uniformly accessible in 20/1000ths of a second. Programing for the all-electronic access Burroughs On-Line Disk File is as easy as programing for magnetic core. It is no longer necessary to reshape the problem to fit the machine.

SEPARATION OF COMMUNICATION CONTROL

Burroughs communication terminal and control units, *separate* from the processor, handle *all* data communi-

BASIC Burroughs B 300 CONFIGURATIONS

SEQUENTIAL PROCESSING

CARD AND PAPER TAPE

Burroughs B 300 systems are available with punched card and/or paper tape input/output, plus line printer output. A full B 300 card system can multiprocess up to 2,800 transactions per minute while printing over 2,000 lines per minute.

MAGNETIC TAPE

Up to six magnetic tape units, up to two card readers, and up to two line printers form the basic input/output equipment in a B 300 magnetic tape configuration. A choice of five magnetic tape models, four card reader models, and five line printer models is available for B 300 systems.

SATELLITE

The B 300 is well suited to card/magnetic tape/printer oriented satellite operations, because it is capable of simultaneously handling input conversion to tape, tape-to-printer output report writing, and one or more additional computational tasks.

MICR

MICR configurations include a selection of high speed document sorter-readers, and six, 12 or 18 high speed, individually controlled listing tapes providing maximum positive control and minimum average passes per item. The full power of the B 300 for general purpose bank data processing may be obtained by expanding the system to include magnetic tape, disk file, and other peripheral units.

cation problems—queuing, polling, optimum line utilization, error detection and correction—*without programming*. The B 300 Central Processor *and the programmer* are concerned only with computational aspects of transaction processing and problem solving.

SOFTWARE

B 300 OPERATING SYSTEMS

B 300 programs are written independently to solve single problems. The operating system will intermix user-selected programs at any time, for maximum system utilization and productivity. It constantly monitors system operation, detects and corrects errors, and communicates instructions to operating personnel. In on-line configurations, the operating system always gives priority to on-line requirements.

COBOL

B 300 COBOL allows the user to solve his business problems *in the language of the problem*. COBOL users have experienced savings of 50% and more in programing time and costs, because COBOL is today's strongest bridge linking business problems to the problem solving power of the computer. Burroughs Corporation has implemented COBOL more extensively than any other computer manufacturer.

BURROUGHS B 100/B 200 PROGRAM LIBRARY

The Burroughs B 300 is program compatible with the Burroughs B 100 and B 200 computer families. Utility routines, assemblers, application package programs, and a large array of other programs, sub-routines and programing aids developed and proved in use for B 100 and B 200 customers are available for direct use by the Burroughs B 300.

RANDOM ACCESS PROCESSING

SATELLITE

Because of its ability to utilize a tag sorting technique and the extremely high operating speed of the disk file, random access B 300 configurations outperform magnetic tape satellite systems many times their cost. For sorting purposes, the Burroughs On-Line Disk File operates as the equivalent of a large number of magnetic tape units.

GENERAL PURPOSE/INQUIRY

The concept of multiple-file random access processing is made feasible by the high operating speed and total flexibility of the Burroughs On-Line Disk File. A single transaction is handled once by the system, fully updating all affected files. The presence of all major files on-line in current status makes on-line inquiry effective.

ON-LINE/DATA COMMUNICATION

Because all data communication control is accomplished by hardware separate from the processor, the Burroughs B 300 offers the equivalent of up to 120 input/output channels for on-line and data communication processing. Specialized data collection and terminal units are available. Burroughs on-line/data communication systems are characterized by high efficiency and flexibility, and low programing and line costs.

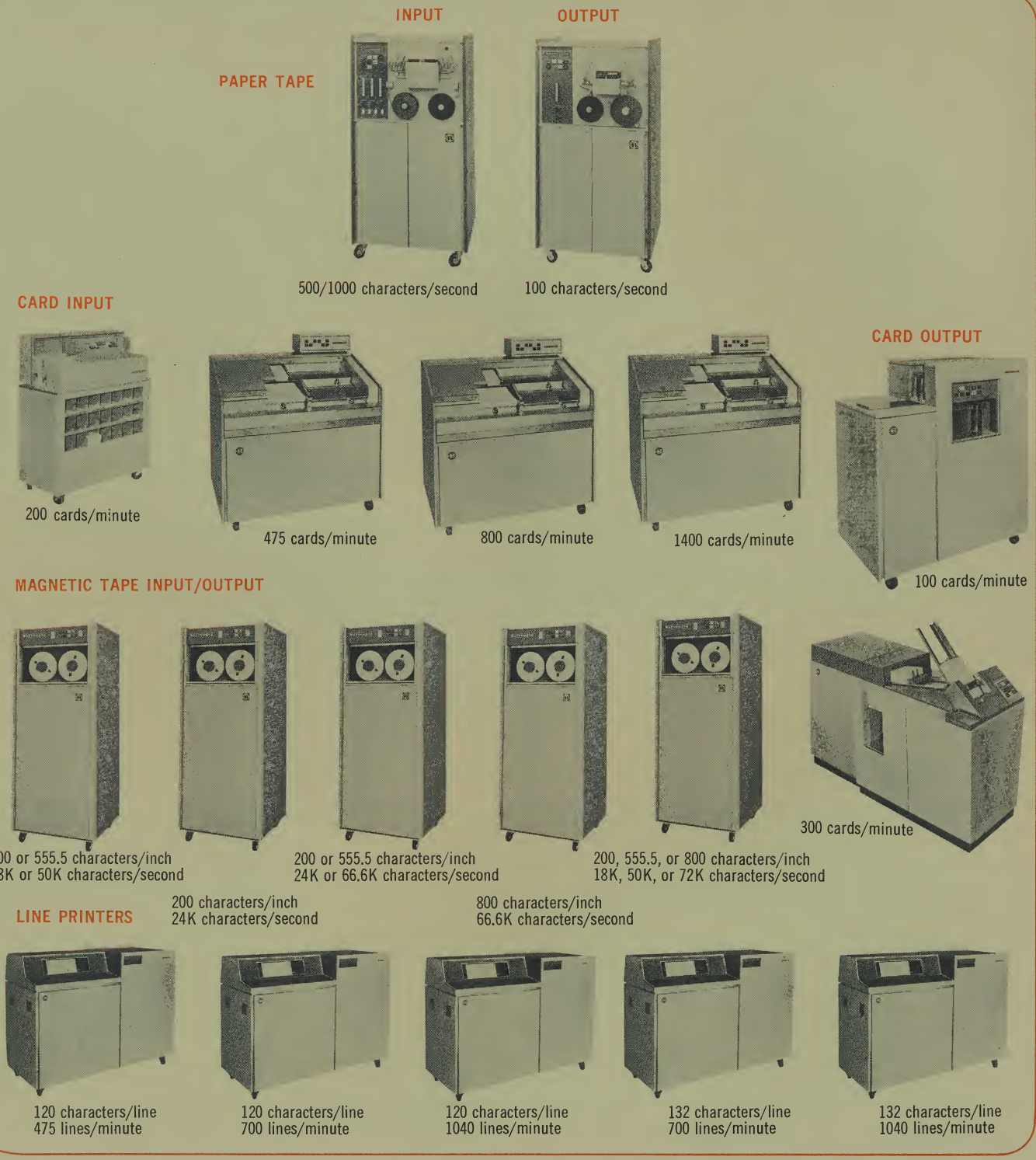
Burroughs B300

SYSTEM MODULARITY

Burroughs B 300 systems may be expanded or upgraded *without reprograming,* except for revisions necessary to make use of new input media or major shifts in processing method (sequential to random access, for example).

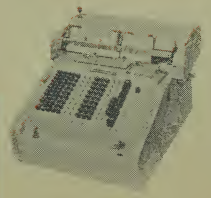
The B 300 Central Processor has three memory sizes. The basic magnetic core memory is 4,800 individually-addressable characters. This may be expanded to 9,600 or 19,200 characters. The B 300 is a character-mode machine with three-address fixed word length instructions, making it extremely easy to program. Features such as buffers, high-low-equal compare, and multiply/divide, optional at extra cost on some computers, are standard on the B 300. Twenty I/O control, command, and feature options make the B 300 Central Processor economical to upgrade to suit changing requirements.

A B 300/disk file system, including on-line and data communication configurations, may include from one to four central processors sharing common random access files and allowing true parallel processing, in addition to multiprocessing by individual processors. The broad range of input/output options available with the Burroughs B 300 is illustrated on this and the adjoining page.



B300
CENTRAL PROCESSOR

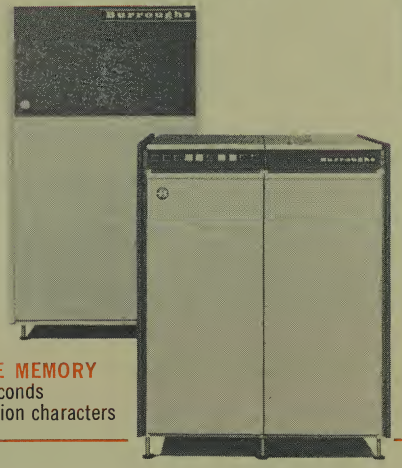
ON-LINE TELLER CONSOLE



SUPERVISORY PRINTER

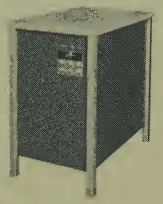
INQUIRY TYPEWRITER STATION

DATA COMMUNICATION CONTROL UNIT
1 to 15 Terminal Units, any combination

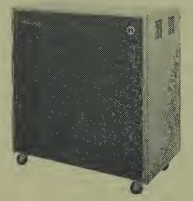


RANDOM ACCESS DISK FILE MEMORY
Average access time: 20 milliseconds
Capacity: 9.6 million to 720 million characters

REMOTE TERMINAL UNIT
1 to 8 On-Line Teller Consoles



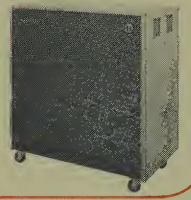
CENTRAL TERMINAL UNIT
1 to 16 Remote Terminal Units
(up to 96 On-Line Teller Consoles per CTU)



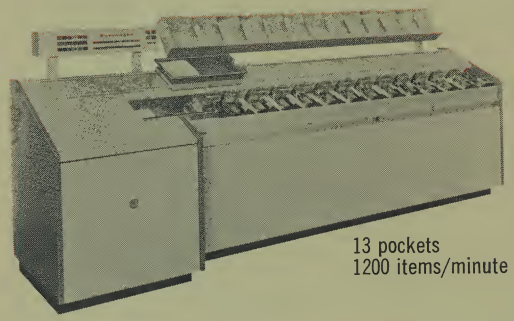
DIAL TWX TERMINAL UNIT
Maximum number of Dial TWX Stations determined by communication volume

TELETYPE TERMINAL UNIT
1 to 399 Teletype Stations

INQUIRY TYPEWRITER TERMINAL UNIT
1 to 8 Inquiry Typewriter Stations

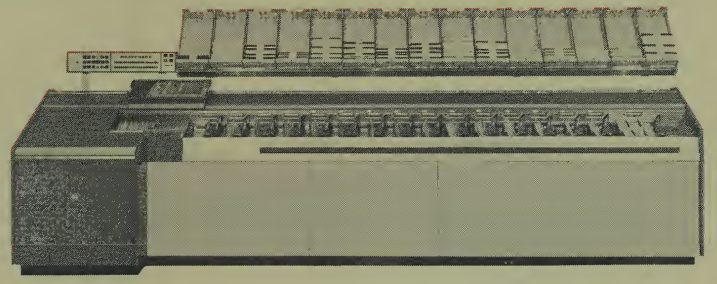


MICR DOCUMENT SORTER-READERS



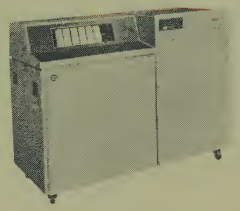
13 pockets
1200 items/minute

13 pockets
1565 items/minute



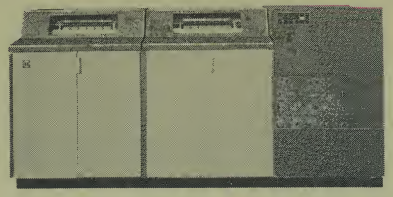
16 pockets
1565 items/minute

MULTIPLE TAPE LISTERS



6 listing tapes
1200 lines/minute

6 listing tapes
1565 lines/minute



12 listing tapes
1565 lines/minute

18 listing tapes
1565 lines/minute

SUPPORT IN DEPTH

FOR PROFITABLE B 300 OPERATION

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SYSTEMS COUNSEL

Your local Burroughs sales and technical representatives offer expert counsel in systems analysis and design. Your personnel are thoroughly trained in programing techniques and system operation. Burroughs system counsel is on a continuing basis, to help keep your B 300 operation profitable for you.

INSTALLATION CONTROL

In the important pre-installation period, local Burroughs personnel and a highly successful Installation Control System help keep you always on schedule, help you get your B 300 on the air smoothly.

SERVICE AND MAINTENANCE

Burroughs Corporation maintains a large force of thoroughly trained computer field engineers who use advanced preventive maintenance techniques to supplement the B 300's exceptionally high reliability.

Wherever There's Business There's

Burroughs

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